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## **President's Report for 2017/2018**

**Swinburne University, Wednesday 27th June 2018**

### **1. Council 2017-2018**

Stuart Wyithe	President
Cath Trott	Vice President
Virginia Kilborn	Immediate Past President
John O'Byrne	Secretary
Marc Duldig	Secretary
Kate Gunn	Treasurer
Elisabete da Cunha	Councillor
Krzysztof Bolejko	Councillor
Lisa Harvey-Smith	Councillor
John Lattanzio	Councillor
Daniel Zucker	Councillor
Leonie Chevalier	Student Representative
Daniel Price (Ex-officio)	Chair, PASA Editorial Board (up to January 2018)
Melanie Johnston-Hollitt	Chair, PASA Editorial Board (from January 2018)
Tanya Hill (Co-opted)	Prizes and Awards co-ordinator
Michael Brown (Co-opted)	Media and Outreach co-ordinator

Earlier this year, the ASA Council accepted the resignation of Daniel Price from the Editorial Board. The ASA Council would like to take the opportunity to acknowledge Daniel Price for his excellent service as Chair of the Editorial Board during the past 4 years. Under Daniel's leadership PASA has continued to grow in stature and quality. Melanie Johnston-Hollitt was appointed as his successor. Melanie has been an Associate Editor for PASA during the past 3 years and brings a wealth of experience to the role.

The ASA Council also accepted the resignation of Kate Gunn as Treasurer. Article 16 of the Constitution states that the Council may invite a person to fill a vacancy and Yeshe Fenner agreed to take over as Treasurer. Kate has revolutionized management of the ASA membership by shepherding the adoption of the Wild Apricot membership system and we thank her for her contributions to the society over the past several years.

I would like to thank all council members for their contributions in the past year. Particular thanks go to council members holding ongoing roles in the society (John O'Byrne, Marc Duldig, Tanya Hill, and Michael Brown). Thanks go also to Gary da Costa for continuing in his role as our "Public Officer", and to Chapter Chairs Daniel Price, Mike Fitzgerald, Manodeep Sinha and Dan Zucker.

## **2. Highlights**

**ASA Database and Web site:** Following the adoption of the Wild Apricot membership system, including development of a new membership database and website led by Kate Gunn and John O'Byrne in 2017, a main activity for 2018 has been development of a re-vamped ASA web site. Progress is slow but this new site should be launched late in 2018.

**Awards:** Members of the ASA were recognized in several awards over the past 12 months:

Paul Lasky won the Australian Academy of Science Pawsey Medal for Physics for his contributions to furthering our understanding of the most exotic regions of the universe.

Rachel Webster was elected to the Australian Academy of Science. The citation from the AAS reads: Rachel Webster is an astrophysicist and international leader in the field of gravitational lensing. She has developed a range of innovative applications, and discovered the first quasar microlensing event. Webster has used lensing to resolve the inner regions of quasars near black holes, providing international leadership in the development of new techniques. In addition, Webster led the first all-sky survey for galaxies rich in neutral Hydrogen, establishing the benchmark for these studies internationally. More recently, Webster initiated and guided Australian participation in experiments to detect the first stars in the Universe, building a new low frequency radio telescope as a precursor to the Square Kilometre Array (SKA).

Prof Ron Ekers was elected as a foreign associate of the National Academy of Sciences in recognition of his distinguished and continuing achievements in original research.

**Meetings:** The 2017 ASA Annual Scientific Meeting was held from the 9th to the 14th of July at The Australian National University, and was opened by Professor Brian Schmidt. This was the 51st Scientific Meeting of the Astronomical Society of Australia. 220 people registered to attend the ASA Meeting at which there were 26 science sessions and 7 special sessions.

The next AIP congress in Perth from 9-13 December will have an astronomy focussed session with a focus on new Australian large facilities. ASA member Lister Staveley-Smith has joined the program committee.

APRIM 2020: As previously announced Australia won the bid to host the Asia-Pacific IAU Meeting (APRIM) in Perth in 2020. The bid was co-led by ICRAR and CASS, and was supported by the ASA, amongst other Australian institutes.

**The Anne Green Prize:** In 2018 the ASA introduced the Anne Green Prize for a mid-career scientist. The Prize will be awarded based on a nominated body of work that supports the scientific accomplishment and the subsequent impact of the research. The research can be in any area of astronomy or a closely related field.

The Prize is named in honour of Professor Anne Green who retired from astronomy research in 2017 (but assures us she is quite well, despite having a prize named for her!). Professor Green was the first female PhD student to be enrolled in the School of Physics at the University of Sydney. She received her PhD in 1973 and after a 12-year break from astronomy, went on to build a prolific career focussed on the ecology and structure of the Milky Way Galaxy. Professor Green was the Director of the renowned Molonglo Observatory for more than a decade and she was appointed the first female Head of Physics at the University of Sydney in 2007. She was also President of the ASA from mid-2003 to 2005 and served on Council for six years. Amongst all her scientific achievements, Professor Green has also been a passionate advocate and inspiring example for Women in Science.

**Increase in value of prizes:** In 2018 the ASA Council approved an increase in prize monies awarded to bring them to the following values:

- Bok Prize (for best honours/masters thesis) winner to receive \$1,000
- Charlene Heisler Prize (for best PhD thesis) winner to receive \$1,000
- Louise Webster Prize (Early Career Researcher) winner to receive \$2,500
- Anne Green Prize (for a significant advance or accomplishment by a Mid-Career Researcher) winner to receive \$2,500 (New!)
- Ellery Lecture (for outstanding contributions to astronomy, awarded every second year) winner to receive \$5,000
- David Allen (achievement in astronomy communication) maintained at \$5,000

It was felt that an increase in the prize monies awarded was long overdue, both because they have remained unchanged for many years and because of the increasing esteem of the prizes. The Society thanks our members for the generous donations that have been received over many years. These help to sustain the awards now and into the future.

### **3. ASA events in 2017/2018**

The 2017 Diversity in Astronomy Workshop was held from 28-29 September 2017 on the campus of Macquarie University in Sydney. The workshop featured talks and interactive sessions from members of the UK's flagship Athena SWAN Project. Building on the IDEA Chapter's commitment to Diversity, the workshop focussed on cultural awareness.

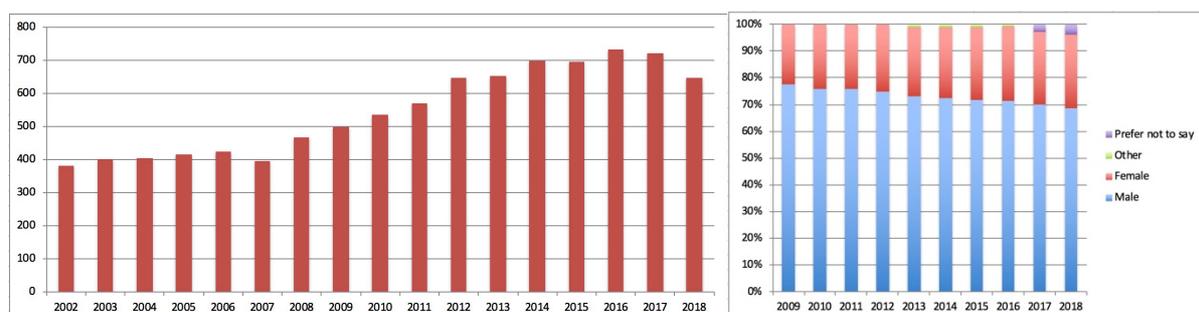
The 12th annual ANITA theory workshop was held on 8th-9th February 2018 at Curtin University in Perth, Western Australia. The workshop provided a review of theoretical astrophysics in Australia, with goals of facilitating collaboration and building the community of theoretical astrophysicists.

The Gravitational wave astronomy school was held on 5th-7th February 2018, at the University of Western Australia, in Perth, Western Australia and the Gingin Gravitational Wave Observatory.

The ECR Mentoring Workshop was held on 2nd-3rd May at the Pullman Bunker Bay Resort, in Margaret River, WA. The theme of this year's workshop was "*Follow your Star*", and touched on topics of career planning both academic and industry based, leadership and skill building.

### **4. ASA membership**

The ASA membership has remained about steady since 2017. Membership numbers are now 648 - these are all classified as 'Active'. Note that the number is lower than reported in recent years (as seen in the plot below), where long term unfinancial members were included. The new, smaller number is a truer representation of the active membership. Likewise the gender breakdown of the society has not changed since 2016, although the new database allows members to choose some options other than Female and Male.



Deaths: 2018 saw the passing of Doug Milne. Doug joined the CSIRO Radiophysics Laboratory in 1951 and worked in the pioneering development of semiconductor devices, and, later, maser and parametric amplifiers for Parkes. In 1962 he joined the radio astronomy group, contributing to the early Parkes surveys, and developing a major interest in supernova remnants, their polarisation and magnetic fields. Doug was one of the ASA's longest-serving Council members, having been Treasurer for 19 years between 1977 and 1998, and is one of only 31 people accorded honorary membership of the ASA. Doug is survived by partner Joan, children and step-children, grandchildren and great grandchildren. A celebration of Doug's life was held at Macquarie Park earlier this week.

## **5. Honorary Fellow**

The ASA Council elected Gary Da Costa from RSAA for Honorary Fellowship of the Society. Gary is a highly regarded optical astronomer whose research has international recognition of the highest standing. He has served the Australian astronomical community and the Society in numerous roles, including on Council for 6 years with a term as President. In addition, Gary has been the ASA's Public Officer for more than a decade since he left the Council, looking after the Society dealings with the ACT Registrar-General related to our society's incorporation including filing of reports and Council membership changes.

## **6. Financial**

The ASA's finances are in a very healthy position. At the time of writing (June 2018) the Foundation for Astronomy holds sufficient funds to cover ASA prizes for the next 15 years, while overall current expenditure is significantly below income, leaving a typical free cash flow of around \$35,000 p.a. Our current membership is at 93% financial or 602 (up from 460 last year) people. This is a result of many people renewing after automatic system reminders and a number of new members. In view of the healthy financial state of the Society, the ASA Council is investigating ways to more effectively forward Society initiatives, including through development of the Strategic Plan.

Details on the Society's finances and audited accounts are available in the Treasurer's report.

## **7. Publications of the ASA (PASA)**

Following the resignation of Daniel Price, Melanie Johnston-Hollitt has been appointed as the new Chair of the Editorial Board for PASA. Melanie has been an Associate Editor for PASA during the past 3 years and brings a wealth of experience to the role having published more than 180 papers and performed many leadership roles of relevance to the Australian and New Zealand astronomical communities, including membership of the MWA and SKA projects.

The Chair of the Editorial Board reports that PASA is doing well, with submissions having increased and the impact factor being on an increasing trajectory. Consequently the threshold for getting into PASA is higher and the quality of the papers being published is now on par with other major journals. Whether PASA should expand or remain at the current ~1000 page per annum level is now being considered.

PASA's previous ISI two-year impact factor (reflecting citations in 2017 to papers published in 2015 and 2016) was released in June 2017, and rose to 4.095. The new impact factor will be available shortly. Other highlights of PASA will be listed in the separate PASA report.

## **8. ASA Prizes and awards**

The following prizes have been awarded during the 2018 Annual Scientific Meeting (ASM):

**Bok Prize for outstanding research in astronomy by an Honours or eligible Masters student** awarded to Matthew Keen for his thesis “Asteroseismology of Subgiant Stars: A Study of Mixed-Mode Oscillations”. Matthew completed his honours research at the University of Sydney, supervised by Tim Bedding and Tanda Li.

**Charlene Heisler Prize for the most outstanding PhD thesis in astronomy** awarded to Anish Amarsi for his thesis “Three-dimensional non-local thermodynamic equilibrium radiative transfer and oxygen abundances in late-type stars” completed at the Australian National University and supervised by Martin Asplund.

**Louise Webster Prize for outstanding research by a scientist early in their post-doctoral career** awarded to Dr Emily Wisnioski from the ANU for the paper “The KMOS 3D Survey: Design, First Results, and the Evolution of Galaxy Kinematics from  $0.7 < z < 2.7$ ” (2015, ApJ, 799, 209).

**Anne Green prize for a significant advance or accomplishment by a mid-career scientist** awarded to Dr Barbara Catinella (ICRAR) for her unique contributions to the studies of cold gas in galaxies and leadership of state of the art projects in the field of gas in galaxies and its connection with star formation.

**Berenice and Arthur Page Medal for excellence in amateur astronomy** awarded to Professor David Moriarty who analyses high resolution spectra of eclipsing binaries in order to derive spectral type and radial velocities to complement his photometric studies. Moriarty is an Honorary Senior Fellow in the School of Mathematics and Physics at UQ and five undergraduate students have benefited from their involvement in the project.

**David Allen Prize for exceptional achievement in astronomy communication** will be awarded at the ASM conference dinner

### **Encouraging gender diversity:**

The ASA is strongly committed to improving the representation and status of women in astronomy. The Society expects that female candidates should comprise at least 30% (increased from previous expectations of 20%) of the nominations for each prize and encourages institutions to help achieve this goal. The percentage of female nominations are variable because of the relatively small total number of applicants, but the statistics over recent years are as follows:

Prize	2018	2017	2016	2015	2014	2013	2012
Bok	0%	29%	50%	83%	50%	0%	17%
Heisler	44%	43%	25%	40%	33%	25%	20%
Webster	100%	0%	0%	100%	33%	0%	0%

Many thanks to Tanya Hill for overseeing the awards, and to the judges of the awards.

## **9. Inclusion, Diversity and Equity in Astronomy (IDEA) Chapter**

Dan Zucker is Chair of the ASA’s IDEA Chapter. The Chapter has undertaken a number of activities over the previous year. These include:

- The 2017 Diversity in Astronomy Workshop was held from 28-29 September 2017 on the campus of Macquarie University in Sydney. The workshop featured talks and interactive sessions from members of the UK's flagship Athena SWAN Project. Building on the IDEA Chapter's commitment to Diversity, the workshop focussed on cultural awareness.

- In 2017, the Pleiades selection criteria underwent a significant update and expansion. However, the process of revision is continuing, as the IDEA steering committee seeks to foster best practice in institutions with respect to a broader vision of diversity and inclusion than had previously been considered. The steering committee anticipates finalising and distributing these selection criteria by early July, in order to allow participating institutions several months to prepare their applications.

## **10. Education and Public Outreach Chapter (EPOC)**

Michael Fitzgerald was elected unopposed as the new Chair of the EPOC Steering Committee. The Chapter has 103 Members, stable compared to last year. It is likely that the committee needs to audit the member list and more actively recruit members. The Chapter has undertaken a number of activities of the over the previous year. These include:

- A significant discussion and construction of input to the ASA Strategic Plan over the second half of 2017.
- The newsletter has been regularly presented and is a quarterly publication presenting a short report by the Chair, upcoming EPO conferences and events as well as recent Australian and International news of relevance to ASA EPOC members.
- The ASA Facebook and Twitter feeds are up and functional as of July 2017. Social Media statistics were [presented in detail in October](#). Since then Twitter followers have increased from 810 to 948 and the Facebook has roughly doubled from 164 to 306 who 'like' the page. This indicates that social media for ASA is growing.

## **11. Australian National Institute for Theoretical Astrophysics (ANITA)**

Daniel Price (Monash) was reappointed chair of the ANITA steering committee unopposed. The Chapter has undertaken a number of activities of the over the previous year. These include:

- ICRAR-UWA hosted the ANITA gravitational wave school for 2018, running from Feb 5th-7th 2018. We hosted 5 expert speakers covering a broad range of gravitational wave science, and attracted 28-33 attendees over the three days. The first two days were hosted at ICRAR-UWA and the third day was hosted at Gingin.
- The annual ANITA workshop was held from 8-9 February 2018 at the Curtin Institute of Radio Astronomy. The meeting was attended by 45 people, and saw talks on a diverse range of topics, from neutron star superfluids to black hole mergers, and computational techniques to array calibration techniques.

## **12. Early Career Research Chapter (ECR)**

Manodeep Sinha is chair of the ECR chapter from 2017-2019. The Chapter has undertaken a number of activities of the over the previous year. These include:

- Mentoring Workshop in Western Australia
- Townhall meeting at ASA ASM 2017
- Speed-meet-a-Mentor at ASA ASM 2017
- Mentoring Program 2018/2019
- Creation of an ex-astronomer google-groups mailing list (not announced publicly yet)

### **13. Designated Observatories**

The ASA has been requested by Standards Australia to compile a list of *designated* optical observatories that are judged to be valuable resources for (i) research, (ii) education and (iii) community use. Acceptance as a designated observatory does not imply any form of legal status, but it should enhance a case for protection against obtrusive lighting. New designated observatories approved in 2017-2018 have been:

- DO2-14 – the Defense Science and Technology Group Ionospheric Observatory at Edinburgh in SA
- TBD - Mapleton Observatory, Kureelipa, QLD

The Standard AS4282 on The Control of the Obtrusive Effects of Outdoor Lighting was issued in October 1997 by Standards Australia and is currently being reviewed. John O'Byrne, Fred Watson and lighting consultant Reg Wilson have been representing the ASA in this review.

### **14. Communications**

The ASA email mailing list remains the primary communication avenue for ASA news. Members can post directly to the list [asa@mailman.sydney.edu.au](mailto:asa@mailman.sydney.edu.au). Note that this is a new form of the address, although the older form still works for now.

Michael Brown is the ASA's media and outreach coordinator and oversees the ASA facebook and twitter accounts and provides general media advice to the society. The ASA (internal) Facebook page continues to be a valuable avenue for quickly highlighting recent articles, awards and upcoming events. A new outward facing Facebook page was created and aims to provide information to a wider audience. The ASA twitter account (@AstroSocAus) has over 700 followers and regularly tweets ASA and general astronomy news.

The ASA Events Calendar lists all ASA sponsored events as well as conferences, workshops and meetings that are open to broad Australian and international participation (see <http://asa.astronomy.org.au/calendar.html>).

Communications from the ASA Council in 2017/2018 included a statement to the membership regarding national survey of Campus safety, and a notice of the ASA being a signatory to STA communique aimed at raising the profile of science and technology in preparation for the next federal election.

### **15. Science & Technology Australia**

The ASA is a member of Science & Technology Australia (STA), which is Australia's peak body across science and technology. ASA members attended major STA events in the past year, including Science Meets Business (Stuart Wyithe and Lisa Kewley), Science Meets Parliament (Krzysztof Bolejko and Elisabete da Cunha) and the STA Presidents and CoE Forum (Stuart Wyithe).

## **17. Progress against 2016/2017 priorities**

- 1) Conduct a census of Society membership to establish detailed demographic information
  - Development of this census is being undertaken by IDEA
- 2) Increase the visibility of the ASA, and Australian astronomy in general, e.g. via coordinated press releases for the 2017 ASA ASM
  - Being undertaken at the 2018 ASM, with pre-warning to University press offices.
- 3) Strategic planning exercise for the ASA, including all chapters
  - A draft strategic plan has been developed around 5 goals:

**Goal 1)** Enhance the ASA's role as the pre-eminent body representing Australian astronomers

**Goal 2)** Expand the scope of the reach and impact of ASA activities, and build on the ASA's role as a facilitator of Australian professional astronomy conversation and networking

**Goal 3)** Maintain the ASA's role as a leader in the promotion of diversity in science and in Australian astronomy in particular

**Goal 4)** Harness the positive impact of Australian astronomy through maximising the effectiveness of educational and outreach activities undertaken by members

**Goal 5)** Broaden the ASA's support for student training, with focus on equity of access to activities and opportunity for all Australian astronomy students

## **16. New Priorities for 2018/2019**

In addition to any carry-forward priorities, council has identified the following possible priorities to concentrate on for the next 12 months (for discussion):

- 1) Finalise and release the strategic plan
- 2) Following the publication of the PASA history, decide on next direction for the ASA history project
- 3) Web upgrade

## **18. Harley Wood School of Astronomy and ASM/AGM 2019**

The 2019 HWSA and ASM/AGM will be hosted by the University of Queensland in 7<sup>th</sup>-12<sup>th</sup> July 2019.

## **17. ASA Council for 2018/2019**

Stuart Wyithe	President
Cathryn Trott	Vice President
Virginia Kilborn	Immediate Past President
Yeshe Fenner	Treasurer
John O'Byrne	Secretary
Marc Duldig	Secretary
Michael Brown	Media and Outreach
Melanie Johnston-Hollitt	PASA editorial Board Chair
Tanya Hill	Prizes and awards co-ordinator
For election	Student Representative
Elisabete da Cunha	Councillor
Krzysztof Bolejko	Councillor
Lisa Harvey-Smith	Councillor
John Lattanzio	Councillor
Daniel Zucker	Councillor

## **19. Closing Remarks**

The ASA remains committed to serving and supporting the community, and bringing Australian Astronomers together to collaborate and enhance research outcomes for Australia. The ASA has taken lead roles in issues of encouraging diversity and equity in Australian science and in encouraging development of researcher's careers within and beyond astronomy.

Over recent years the ASA has seen significant growth, built on the growth and success of Australian astronomy as a whole, and the society is now in a position to expand and enhance its successful activities. Some ideas for this will be outlined in the draft strategic plan. I encourage members to provide feedback to council on this plan, and in particular to input new ideas for how the ASA can better serve Australian astronomers.

Yours sincerely



Professor Stuart Wyithe